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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,265	10/02/2003	Edward J. Kroliczek	2507-8637.1US (22235-US-0	3460

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EXAMINER	
CIRIC, LJILJANA V	

ART UNIT	PAPER NUMBER
3785	

NOTIFICATION DATE	DELIVERY MODE
02/18/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTOMail@traskbritt.com

Office Action Summary	Application No.	Applicant(s)	
	10/676,265	KROLICZEK ET AL.	
	Examiner	Art Unit	
	Ljiljana (Lil) V. Ciric	3785	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *02 December 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-12,16,18-47,49-54,57,59,60,63-65 and 79-85* is/are pending in the application.

4a) Of the above claim(s) *19-23,29-47,49-51,63 and 79-85* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-12,16,18,24-28,52-54,57,59,60,64 and 65* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 February 2010* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/02/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office action is in response to the reply filed on December 2, 2010.

Response to Arguments

2. Applicant's arguments filed on December 2, 2010 have been fully considered but they are not persuasive.

In response to applicant's argument that the Shaubach et al. reference fails to anticipate the inventive apparatus as recited in claims 1, 6 through 12, 16, 26, and 28, it is hereby noted that the applicant relies on qualitative terms related to the intended use/operation of various structural elements of the inventive apparatus (i.e., a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In this instance, the prior art reference to Shaubach et al. discloses a heat pipe 28 capable of evaporating a working fluid, as well as a wall 32 capable of serving as a barrier to liquid flow, a channel 38 through which vapor can travel and be removed from another part of the heat pipe 28, a channel 34 through which liquid can flow, and an inlet or opening 30 through which liquid can flow into a part of the heat pipe 28. Applicant is furthermore reminded that pending claims are to be given their broadest reasonable interpretation.

In response to applicant's arguments that the obviousness rejections of claims 2, 3, 18, 24, 25, 52 through 54, 57, 59, 60, and 64 based on the Shaubach et al. reference are improper because these are based on purportedly conclusory statements, the examiner hereby mere reversal of parts, duplication of parts, and rearrangement of parts relate to obvious design choice and have no patentable significance unless either criticality and/or new and unexpected results are produced. See In re Gazda, 219 F.2d 449, 104 USPQ 400 (CCPA 1955), In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960), and In re

Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) . In this instance, applicant has failed to make a showing of either criticality or of unexpected results.

Election/Restrictions

3. Claims 79 through 85 hereby remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to the non-elected Group II, whereas claims 19 through 23, 29 through 47, 49 through 51, and 63 also remain withdrawn from consideration pursuant to the same, there being no allowable generic or linking claim. Election was made **without** traverse in the replies filed on August 19, 2008 and on December 31, 2008, as well as more recently on June 10, 2010.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 6 through 12, 16, 26, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Shaubach et al. (U.S. Patent No. 4,854,379).

Shaubach et al. (especially Figure 4) discloses an evaporator or heat pipe 28 essentially as claimed, including, for example: a heated wall heated by heat sources 36; a liquid barrier wall corresponding to artery 32; a primary wick 40 extending from a portion of the heated wall to a portion of the liquid barrier wall as shown in Figure 4; a vapor removal channel 38; a liquid flow channel 34; and, a liquid inlet or opening 30.

The reference thus reads on the claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2, 3, 18, 24, 25, 52 through 54, 57, 59, 60, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaubach et al. (U.S. Patent No. 4,854,379).

As noted in greater detail above, Shaubach et al. discloses an evaporator or heat pipe 28 essentially as claimed, including a vapor removal channel 38 and a liquid flow channel 34, for example.

With regard to claims 2, 3, and 18, Shaubach et al. fails to disclose a plurality of vapor removal channels and liquid flow channels as recited in the claims. However, absent a showing a criticality and/or unexpected results, duplication of parts (i.e., channels) does not impart patentability.

Thus, it would have been obvious to one skilled in the art at the time of invention to modify the evaporator or heat pipe 28 of Shaubach et al. by increasing the number of vapor removal channels and of liquid flow channels in order to increase the heat transfer area and volume (and thus the heat transfer capacity) of the evaporator or heat pipe 28.

With regard to claims 24, 25, 52 through 54, 57, 59, 60, and 64, Shaubach et al. fails to disclose the primary wick, the heated wall, and the liquid barrier wall as having the particular spatial interrelationships as recited in the claims. However, again, absent a showing of criticality and/or unexpected results, neither reversal nor rearrangement of parts imparts patentability.

Thus, it would have been obvious to one skilled in the art at the time of invention to modify the evaporator or heat pipe 28 of Shaubach et al. by rearranging the various elements of the evaporator or heat pipe 28 by disposing these coaxially relative to one another in order to save space, for example. It would have been similarly obvious to one skilled in the art at the time of invention to modify the evaporator or heat pipe 28 of Shaubach et al. by reversing/inverting the relative arrangement of the various elements of the evaporator or heat pipe 28 in order to save space, for example.

8. Claims 27 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaubach et al. (U.S. Patent No. 4,854,379) in view of Ghoshal (US 2002/0062648 A1).

As noted in greater detail above, Shaubach et al. discloses an evaporator or heat pipe 28 essentially as claimed, including a liquid flow channel 34 and a liquid barrier wall corresponding to liquid artery 32 therein.

However, Shaubach et al. fails to disclose fins disposed on an outer surface of the liquid barrier wall. Nevertheless, it is very well known in the art and taught by Ghoshal to have fins or heat dissipators disposed on the outside of a liquid barrier wall of an evaporator or heat pipe in order to enhance cooling.

Thus, it would have been obvious to one skilled in the art at the time of invention to modify the evaporator or heat pipe 28 of Shaumbach et al. by adding external fins or heat dissipators as taught by Ghoshal in order to enhance cooling by increasing the heat transfer surface area and corresponding heat transfer rate through the wall to which the fins or heat dissipators are attached.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy J. Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ljiljana (Lil) V. Ciric/

Primary Examiner, Art Unit 3785